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34456 7590 01/30/2007 LARSON NEWMAN ABEL POLANSKY & WHITE, LLP 5914 WEST COURTYARD DRIVE SUITE 200 AUSTIN, TX 78730			EXAMINER CHAI, LONGBIT	
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Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/992,823

Applicant(s)

WONG ET AL.

Examiner

Longbit Chai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 and 49-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-47 and 49-54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Currently pending claims are 1 – 47 and 49 – 54.

Response to Arguments

1. Applicant's arguments filed on 11/30/2006 with respect to the subject matter of the instant claims have been fully considered but are not persuasive.

2. As per claim 1 (& 17, 31, 40, 47 and 49), Applicant remarks Ciacelli does not disclose that "sending a first encrypted routine of a software driver".

Examiner respectfully disagrees because (a) an encrypted version of the actual decryption algorithm, as taught by Ciacelli (Column 5 Line 43 – 45), is qualified as "a first encrypted routine", and (b) this particular routine is transmitted to a receiving hardware device (such as a decoder) and used / executed by an additional software module (i.e. software driver) of the receiving hardware device (such as a decoder) to decrypt the encrypted data (Ciacelli: Column 2 Line 60 – 63) and as such "sending a first encrypted routine" that is used by a software driver is considered as "sending a first encrypted routine of a software driver" to meet the claim language. Examiner notes this is also consistent with the disclosure of the specification of the instant application that describes "the software driver incorporates sensitive data that, if divulged, could possibly allow an unauthorized party access to data processed by the software drive – for example, the sensitive data could include encryption routines for encrypting data transmitted between the software driver and the peripheral device" (SPEC: Page

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3 Line 10 – 15). Therefore, Examiner notes software driver incorporates encryption / decryption routines for encrypting / decrypting data and the “encrypted decryption algorithm routine”, as taught by (Ciacelli: Column 5 Line 43 – 45) meets the claim language as “an encrypted routine” of a software driver.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraph of 35 U.S.C. 102 that forms the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3, 8, 9, 13, 16, 31, 33, 38 – 41, 47, 49, 51 and 52 are rejected under 35 U.S.C. 102(e) as being anticipated by Ciacelli (U.S. Patent 6,236,727).

As per claim 1, 31, 40 and 49, Ciacelli teaches a method comprising the steps of: **sending a first encrypted routine of a software driver to a peripheral device, wherein the software driver is to interface with the peripheral device** (Ciacelli: Column 2 Line 61 – 63 and Column 5 Line 43 – 45: the encryption / decryption algorithm routines used by the software driver are considered as part of the software driver, which also appear in the disclosure of the instant application (SPEC: Page 3 Line 10 – 15 and its claim 2 & 3) and as

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such the encrypted version of the actual decryption algorithm, as taught by Ciacelli, is considered as a first encrypted routine of a software driver and the hardware device 27 is considered as a peripheral device to meet the claim language as recited. Examiner notes (a) an encrypted version of the actual decryption algorithm, as taught by Ciacelli (Column 5 Line 43 – 45), is qualified as “a first encrypted routine”, and (b) this particular routine is transmitted to a receiving hardware device (such as a decoder) and used / executed by an additional software module (i.e. software driver) of the receiving hardware device (such as a decoder) to decrypt the encrypted data (Ciacelli: Column 2 Line 60 – 63) and as such “sending a first encrypted routine” that is used by a software driver is considered as “sending a first encrypted routine of a software driver” to meet the claim language. Examiner notes this is also consistent with the disclosure of the specification of the instant application that describes “the software driver incorporates sensitive data that, if divulged, could possibly allow an unauthorized party access to data processed by the software drive – for example, the sensitive data could include encryption routines for encrypting data transmitted between the software driver and the peripheral device” (SPEC: Page 3 Line 10 – 15). Therefore, Examiner notes software driver incorporates encryption / decryption routines for encrypting / decrypting data and the “encrypted decryption algorithm routine”, as taught by (Ciacelli: Column 5 Line 43 – 45) meets the claim language as “an encrypted routine” of a software driver;

decrypting, at the peripheral device, the first encrypted routine to generate a plaintext routine (Ciacelli: Column 5 Line 46 – 48: decrypting at the hardware device 27); and

providing the plaintext routine to the software driver (Ciacelli: Column 5 Line 54 – 55: the decrypted “decryption routine” must be presented to the software driver so that the decryption function, as part of the software driver routines, can decrypt the data accordingly).

As per claim 47, Ciacelli teaches a method comprising the steps of:

sending a first encrypted routine of a first software driver to a peripheral device, wherein the software driver is to interface with the peripheral device (Ciacelli: Column 2 Line 61 – 63 and Column 5 Line 43 – 45: the encryption / decryption algorithm routines are considered as part of the software driver, which also appear in the disclosure of the instant application (SPEC: Page 3 Line 10 – 15 and its claim 2 & 3) and as such the encrypted version of the actual decryption algorithm, as taught by Ciacelli, is considered as a first encrypted routine of a software driver and the hardware device 27 is considered as a peripheral device to meet the claim language as recited);

decrypting, at the peripheral device, the first encrypted routine to generate a plaintext routine (Ciacelli: Column 5 Line 46 – 48: decrypting at the hardware device 27); and

providing the plaintext routine to a second software driver (Ciacelli: Column 5 Line 54 – 55 and Column 6 Line 54 – 60: the 1st and the 2nd software

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drivers are interpreted as being characterized by the time difference during the process in a timely manner; and the decrypted "decryption routine" must be presented to the software driver so that the decryption function, as part of the software driver routines, can decrypt the data accordingly).

As per claim 3, Ciacelli teaches the first encrypted routine is an encrypted version of a decryption routine (Ciacelli: Column 5 Line 43 – 45).

As per claim 8, 33 and 38, Ciacelli teaches sending a decryption code to the peripheral device, where the decryption code is to be used by the peripheral device to decrypt the first encrypted routine (Ciacelli: Column 5 Line 45 – 60).

As per claim 9, Ciacelli teaches removing the plaintext routine (Ciacelli: Column 7 Line 16 – 21).

As per claim 13, Ciacelli teaches selecting the first encrypted routine from a plurality of different encrypted routines, wherein the plurality of different encrypted routines are functionally equivalent (Ciacelli: Column 5 Line 55 – 57).

As per claim 16, Ciacelli teaches providing includes storing the plaintext routine in a location in memory accessible by the software driver, and where the location in memory is known to the software driver (Ciacelli: Column 5 Line 43 – 50 and Column 6 Line 54 – 60: the decrypted "encryption / decryption routine"

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must be, first, stored in the memory somewhere and secondly, must be known to the software driver so that the encryption / decryption algorithm functions can be performed and executed accordingly to encrypt / decrypt the data).

As per claim 39, Ciacelli teaches sending a encryption code to the peripheral device, where the encryption code is to be used by the peripheral device to encrypt the plaintext routine (Ciacelli: Column 6 Line 42 – 45: an encryption key is qualified as an encryption code – i.e. key code).

As per claim 41, Ciacelli teaches said first interface and said second interface are implemented using a same interface (Ciacelli: see for example: Column 5 Line 43 – 48: the same interface of decryption module to receive and execute the decryption function for encrypted routine).

As per claim 51, Ciacelli teaches the first encrypted data includes an encrypted version of one of: a private encryption key, a private decryption key, a chip ID, and a device ID (Ciacelli: Column 6 Line 42 – 45).

As per claim 52, Ciacelli teaches the application includes a software driver (Ciacelli: see for example: Column 5 Line 54 – 55: the decrypted “decryption routine” must be presented to the software driver as part of the applications so that the decryption function can be performed and executed accordingly to decrypt the data).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A person shall be entitled to a patent unless –

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 17 – 27 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ciacelli (U.S. Patent 6,236,727)), in view of Freeman (U.S. Patent 2002/0129374), and in view of Hayashi et al. (U.S. Patent 5,930,361).

As per claim 17, Ciacelli teaches a method comprising:

sending a first encrypted routine of a software driver to a hardware device, wherein the software driver is to interface with the hardware device, and where the first encrypted routine is an encrypted version of a decryption routine (Ciacelli: Column 2 Line 61 – 63 and Column 5 Line 43 – 45: the encryption / decryption algorithm routines are considered as part of the software driver, which also appear in the disclosure of the instant application (SPEC: Page 3 Line 10 – 15 and its claim 2 & 3) and as such the encrypted version of the actual decryption algorithm, as taught by Ciacelli, is considered as a first encrypted routine of a software driver and the hardware device 27 is considered as a peripheral device to meet the claim language as recited).

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However, Ciacelli does not disclose expressly the **(a) hardware device is a graphic chip (b) the first encrypted routine is an encrypted version of an encryption routine**; instead of a decryption routine.

Freeman teaches the **hardware device is a graphic chip** (Freeman: see for example, Paragraph [0117]).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Freeman within the system of Ciacelli because (a) Ciacelli discloses the video multimedia content scrambling system (CSS) and Moving Picture Expert Group (MPEG) standard (Ciacelli: Column 3 Line 25 – 43 and Column 2 Line 48 – 50 and (b) Freeman teaches using a graphic chip to realize the MPEG adaptation and to process the video data stream (Freeman: Paragraph [0117] and Figure 7 Element 376 & 388).

Hayashi (in view of Ciacelli) teaches **the first encrypted routine is an encrypted version of an encryption routine** (Hayashi: Column 7 Line 65 – Column 8 Line 2 and Column 3 Line 13 & Ciacelli: Column 5 Line 43 – 45, Column 6 Line 55 – 60 and Column 7 Line 61 – 63: This is because Ciacelli teaches first, sending the encryption version of the decryption algorithm to the hardware device and further teaches the re-scrambling (i.e. re-encryption) may be needed and Hayashi teaches the encryption algorithm can also be encrypted and transmitted from up-stream to the down-stream set-tops for scrambling / encrypting the video pictures).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Freeman within the system of Ciacelli as modified because (a) Ciacelli teaches first, sending the encryption version of the decryption algorithm to the hardware device (Ciacelli: Column 5 Line 43 – 45) and further teaches the re-scrambling (i.e. re-encryption) may be needed (Ciacelli: Column 6 Line 55 – 60 and Column 7 Line 61 – 63) and (b) Hayashi teaches the encryption algorithm can also be encrypted and transmitted from up-stream to the down-stream set-tops for scrambling / encrypting the video pictures (Hayashi: Column 7 Line 65 – Column 8 Line 2 and Column 3 Line 13).

decrypting, at the graphics chip, the first encrypted routine to generate a plaintext routine, wherein the plaintext routine is a version of the encryption routine (Ciacelli: Column 5 Line 46 – 48 & Hayashi: Column 7 Line 65 – Column 8 Line 2); and

storing the plaintext routine in memory in a location known to the software driver (Ciacelli: Column 5 Line 43 – 50 and Column 6 Line 54 – 60: the decrypted “encryption / decryption routine” must be, first, stored in the memory somewhere and secondly, must be known to the software driver so that the encryption / decryption algorithm functions can be performed and executed accordingly to encrypt / decrypt the data).

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As per claim 18, Ciacelli teaches sending a decryption code to the peripheral device, where the decryption code is to be used by the peripheral device to decrypt the first encrypted routine (Ciacelli: Column 5 Line 45 – 60).

As per claim 19, Ciacelli as modified teaches decrypting is performed by a graphics chip (Ciacelli: see for example: Column 3 Line 25 – 43, Column 5 Line 43 – 60 and Column 2 Line 48 – 50: See the same rationale addressed above in claim 17).

Ciacelli in view of Freeman does not disclose expressly decrypting is performed by a 3D pipe of the graphics chip.

However, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Ciacelli to accommodate decrypting is performed by a 3D pipe of the graphics chip because Ciacelli in view of Freeman teaches decrypting / encrypting can be performed by multiple peripheral devices in MPEG video data encryption techniques (Ciacelli: see for example, Column 7 Line 58 – 65 and Column 2 Line 48 – 50) and 3D (3-Dimension) engine is merely one part of a series of video graphic chips in this claimed subject of matter to perform encryption / decryption).

As per claim 20, Ciacelli as modified teaches decrypting is performed by a graphics chip (Ciacelli: see for example: Column 3 Line 25 – 43, Column 5 Line 43 – 60: See the same rationale addressed above in claim 17).

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Ciacelli in view of Freeman does not disclose expressly decrypting is performed by a IDCT component of the graphics chip.

However, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Ciacelli to accommodate decrypting is performed by a IDCT component of the graphics chip because Ciacelli in view of Freeman teaches decrypting / encrypting can be performed by multiple peripheral devices in MPEG video data encryption techniques (Ciacelli: see for example, Column 7 Line 58 – 65 and Column 2 Line 48 – 50) and IDCT component is merely one part of a series of video graphic chips in this claimed subject of matter to perform encryption / decryption).

As per claim 21, Ciacelli as modified teaches decrypting is performed by dedicated encryption hardware of the graphics chip (Ciacelli: see for example: Abstract Line 15 – 17 and Column 2 Line 55 – 63).

As per claim 22, Ciacelli as modified teaches decrypting is performed through a series of components coupled within the graphics chip (Ciacelli: see for example: Column 7 Line 58 – 65).

As per claim 23, Ciacelli as modified teaches removing the plaintext routine (Ciacelli: see for example: Column 7 Line 16 – 21).

As per claim 24, Ciacelli as modified teaches encrypting, at the peripheral device, the plaintext routine to generate a second encrypted routine, where the second encrypted routine is a version of the first encrypted routine (Hayashi: Column 7 Line 65 – Column 8 Line 2 and Column 3 Line 13 & Ciacelli: Column 5 Line 43 – 45, Column 6 Line 55 – 60 and Column 7 Line 61 – 63); storing the second encrypted routine in memory in a location known to the software driver (Ciacelli: Column 5 Line 43 – 50 and Column 6 Line 54 – 60: the decrypted “encryption / decryption routine” must be, first, stored in the memory somewhere and secondly, must be known to the software driver so that the encryption / decryption algorithm functions can be performed and executed accordingly to encrypt / decrypt the data).

As per claim 25, Ciacelli as modified teaches sending a encryption code to the peripheral device, where the encryption code is to be used by the peripheral device to encrypt the plaintext routine (Ciacelli: Column 6 Line 42 – 45: an encryption key is qualified as an encryption code – i.e. key code. Regarding encrypting the plaintext routine, see the same rationale addressed above in claim 10).

As per claim 26, Ciacelli as modified teaches the second encrypted routine is a modified version of the first encrypted routine (Hayashi: Column 7 Line 65 – Column 8 Line 2 and Column 3 Line 13 & Ciacelli: Column 5 Line 43 – 45, Column 6 Line 55 – 60 and Column 7 Line 61 – 63).

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As per claim 27, Ciacelli as modified teaches selecting the first encrypted routine from a plurality of different encrypted routines, wherein the plurality of different encrypted routines are functionally equivalent (Ciacelli: see for example: Column 14 Line 10 – 15).

As per claim 30, Ciacelli as modified teaches providing includes storing the plaintext routine in a location in memory accessible by the software driver, and where the location in memory is known to the software driver (Ciacelli: Column 5 Line 43 – 50 and Column 6 Line 54 – 60: the decrypted “encryption / decryption routine” must be, first, stored in the memory somewhere and secondly, must be known to the software driver so that the encryption / decryption algorithm functions can be performed and executed accordingly to encrypt / decrypt the data).

4. Claims 2, 10 – 12, 32, 42, 43, 50 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ciacelli (U.S. Patent 6,236,727), in view of Hayashi et al. (U.S. Patent 5,930,361).

As per claim 2 and 50, Ciacelli does not disclose expressly the first encrypted routine is an encrypted version of an encryption routine.

Hayashi (in view of Ciacelli) teaches the first encrypted routine is an encrypted version of an encryption routine (Hayashi: Column 7 Line 65 – Column 8 Line 2 and Column 3 Line 13 & Ciacelli: Column 5 Line 43 – 45, Column 6 Line

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55 – 60 and Column 7 Line 61 – 63: This is because Ciacelli teaches first, sending the encryption version of the decryption algorithm to the hardware device and further teaches the re-scrambling (i.e. re-encryption) may be needed and Hayashi teaches the encryption algorithm can also be encrypted and transmitted from up-stream to the down-stream set-tops for scrambling / encrypting the video pictures).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Freeman within the system of Ciacelli because (a) Ciacelli teaches first, sending the encryption version of the decryption algorithm to the hardware device (Ciacelli: Column 5 Line 43 – 45) and further teaches the re-scrambling (i.e. re-encryption) may be needed (Ciacelli: Column 6 Line 55 – 60 and Column 7 Line 61 – 63) and (b) Hayashi teaches the encryption algorithm can also be encrypted and transmitted from up-stream to the down-stream set-tops for scrambling / encrypting the video pictures (Hayashi: Column 7 Line 65 – Column 8 Line 2 and Column 3 Line 13).

As per claim 10, 32 and 54, Ciacelli does not disclose expressly encrypting, at the peripheral device, the plaintext routine to generate a second encrypted routine, where the second encrypted routine is a version of the first encrypted routine.

Hayashi (in view of Ciacelli) teaches encrypting, at the peripheral device, the plaintext routine to generate a second encrypted routine, where the second encrypted routine is a version of the first encrypted routine (Hayashi: Column 7 Line 65 – Column 8 Line 2 and Column 3 Line 13 & Ciacelli: Column 5 Line 43 –

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45, Column 6 Line 55 – 60 and Column 7 Line 61 – 63: This is because Ciacelli teaches first, sending the encryption version of the decryption algorithm to the hardware device and further teaches the re-scrambling (i.e. re-encryption) may be needed and Hayashi teaches the encryption algorithm can also be encrypted and transmitted from up-stream to the down-stream set-tops for scrambling / encrypting the video pictures).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Freeman within the system of Ciacelli because (a) Ciacelli teaches first, sending the encryption version of the decryption algorithm to the hardware device (Ciacelli: Column 5 Line 43 – 45) and further teaches the re-scrambling (i.e. re-encryption) may be needed (Ciacelli: Column 6 Line 55 – 60 and Column 7 Line 61 – 63) and (b) Hayashi teaches the encryption algorithm can also be encrypted and transmitted from up-stream to the down-stream set-tops for scrambling / encrypting the video pictures (Hayashi: Column 7 Line 65 – Column 8 Line 2 and Column 3 Line 13).

providing the second encrypted routine to the software driver (Ciacelli: Column 5 Line 54 – 55: the decrypted “decryption routine” must be presented to the software driver so that the decryption function, as part of the software driver routines, can decrypt the data accordingly).

As per claim 11, Ciacelli as modified teaches sending a encryption code to the peripheral device, where the encryption code is to be used by the peripheral device to encrypt the plaintext routine (Ciacelli: Column 6 Line 42 – 45: an

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encryption key is qualified as an encryption code – i.e. key code. Regarding encrypting the plaintext routine, see the same rationale addressed above in claim 10).

As per claim 12, Ciacelli as modified teaches the second encrypted routine is a modified version of the first encrypted routine (Hayashi: Column 7 Line 65 – Column 8 Line 2 and Column 3 Line 13 & Ciacelli: Column 5 Line 43 – 45, Column 6 Line 55 – 60 and Column 7 Line 61 – 63).

As per claim 42, the claim limitations are met as the same reasons as that set forth above in rejecting claim 10 and 11.

As per claim 43, Ciacelli as modified teaches the first hardware component and the second component are implemented using a same hardware component (Ciacelli: see for example: Column 5 Line 43 – 48: the same hardware component of decryption module to receive and execute the decryption function for encrypted routine).

5. Claims 4 – 7, 34 – 37, 44 – 46 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ciacelli (U.S. Patent 6,236,727), in view of Freeman (U.S. Patent 2002/0129374).

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As per claim 4, 34 and 53, Ciacelli does not disclose expressly the peripheral device is a graphics chip.

Freeman teaches the hardware device is a graphic chip (Freeman: see for example, Paragraph [0117]).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Freeman within the system of Ciacelli because (a) Ciacelli discloses the video multimedia content scrambling system (CSS) and Moving Picture Expert Group (MPEG) standard (Ciacelli: Column 3 Line 25 – 43 and Column 2 Line 48 – 50 and (b) Freeman teaches using a graphic chip to realize the MPEG adaptation and to process the video data stream (Freeman: Paragraph [0117] and Figure 7 Element 376 & 388).

As per claim 5, 35 and 44, Ciacelli as modified teaches decrypting is performed by a graphics chip (Ciacelli: see for example: Column 3 Line 25 – 43, Column 5 Line 43 – 60 and Column 2 Line 48 – 50: See the same rationale addressed above in claim 17).

Ciacelli in view of Freeman does not disclose expressly decrypting is performed by a 3D pipe of the graphics chip.

However, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Ciacelli to accommodate decrypting is performed by a 3D pipe of the graphics chip because Ciacelli in view of Freeman teaches decrypting / encrypting can be performed by multiple

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peripheral devices in MPEG video data encryption techniques (Ciacelli: see for example, Column 7 Line 58 – 65 and Column 2 Line 48 – 50) and 3D (3-Dimension) engine is merely one part of a series of video graphic chips in this claimed subject of matter to perform encryption / decryption).

As per claim 6, 36 and 45, Ciacelli as modified teaches decrypting is performed by a graphics chip (Ciacelli: see for example: Column 3 Line 25 – 43, Column 5 Line 43 – 60: See the same rationale addressed above in claim 17).

Ciacelli in view of Freeman does not disclose expressly decrypting is performed by a IDCT component of the graphics chip.

However, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Ciacelli to accommodate decrypting is performed by a IDCT component of the graphics chip because Ciacelli in view of Freeman teaches decrypting / encrypting can be performed by multiple peripheral devices in MPEG video data encryption techniques (Ciacelli: see for example, Column 7 Line 58 – 65 and Column 2 Line 48 – 50) and IDCT component is merely one part of a series of video graphic chips in this claimed subject of matter to perform encryption / decryption).

As per claim 7, 37 and 46, Ciacelli as modified teaches decrypting is performed by dedicated encryption hardware of the graphics chip (Ciacelli: see for example: Abstract Line 15 – 17 and Column 2 Line 55 – 63).

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6. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ciacelli (U.S. Patent 6,236,727), in view of Wilson (U.S. Patent 4,520,232).

As per claim 14, Ciacelli does not disclose expressly decrypting includes using a map as a decryption key.

Wilson teaches decrypting includes using a map as a decryption key (Wilson: see for example: Column 2 Line 12 – 24).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Wilson within the system of Ciacelli because (a) Ciacelli discloses the video multimedia content scrambling system (CSS) and Moving Picture Expert Group (MPEG) standard (Ciacelli: Column 3 Line 25 – 43 and Column 2 Line 48 – 50 and (b) Wilson teaches providing a poly-graphic encryption mechanism which is both fast and inexpensive with enhanced security strength (Wilson: see for example, Column 1 Line 28 – 34).

As per claim 15, Ciacelli as modified teaches the map includes a texture map (Wilson: see for example, Column 1 Line 28 – 34: the matrix is qualified as a two-dimensional texture map).

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7. Claims 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ciacelli (U.S. Patent 6,236,727), in view of Freeman (U.S. Patent 2002/0129374), in view of Hayashi et al. (U.S. Patent 5,930,361), and in view of Wilson (U.S. Patent 4,520,232).

As per claim 28, Ciacelli as modified does not disclose expressly decrypting includes using a map as a decryption key.

Wilson teaches decrypting includes using a map as a decryption key (Wilson: see for example: Column 2 Line 12 – 24).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Wilson within the system of Ciacelli as modified because (a) Ciacelli discloses the video multimedia content scrambling system (CSS) and Moving Picture Expert Group (MPEG) standard (Ciacelli: Column 3 Line 25 – 43 and Column 2 Line 48 – 50 and (b) Wilson teaches providing a poly-graphic encryption mechanism which is both fast and inexpensive with enhanced security strength (Wilson: see for example, Column 1 Line 28 – 34).

As per claim 29, Ciacelli as modified teaches teaches the map includes a texture map (Wilson: see for example, Column 1 Line 28 – 34: the matrix is qualified as a two-dimensional texture map).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Longbit Chai whose telephone number is 571-272-3788. The examiner can normally be reached on Monday-Friday 8:00am-4:00pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R. Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Longbit Chai
Examiner
Art Unit 2131


LBC


AYAZ SHEIKH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100